

REMARKS

This Response addresses the issues raised by the Examiner in the Office Action mailed June 7, 2004. Initially, Applicants would like to thank the Examiner for the careful consideration given this case. In view of the above amendments and the following remarks, Applicants feel that all outstanding issues have been addressed and prompt allowance of all remaining claims is respectfully requested.

Claim Objection

The Examiner objected to the term “the computer” in Claim 6. Claim 6 has been amended according to the Examiner’s suggestion to overcome this objection.

§ 102 Rejections

The Examiner rejected Claims 1 and 7 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Publication No. 2002/0005902 to Yuen (“Yuen”). Specifically, the Examiner stated that Yuen “discloses in Figure 1, a video imaging system, the system comprising: a master video camera (camera 104 operating in wide-angle, see ([0013]) for producing video images of a moving object (100) of interest; a plurality of additional video cameras (108 and 112) each positioned at a different location for producing additional video images of the object of interest from different spatial perspectives; and a control system for controlling said additional video cameras in response to the master video camera to follow the movement of the object of interest.” Respectfully, the cited portions of Yuen are not directed to the claimed elements of the present invention.

Yuen describes a camera-based security system and is not directed to a video imaging system. In Yuen, a single, stationary, wide-angle camera is used to image an entire field of view (e.g., in a store), and one or more movable secondary

cameras (each covering only a portion of the wide field of view covered by the stationary camera), are used to follow a specific activity occurring within the stationary camera's wide field of view. A computer attached to the video feed of the stationary camera analyzes successive video frames to determine whether there is a moving object within the wide field of view. If so, the location of this moving object may be determined via software, and the secondary cameras are moved to image the moving objects from different spatial views.

The present invention is directed to a full-function video production system utilizing a plurality of highly adjustable cameras that are automatically adjusted to follow an object of interest such that the object of interest is maintained at a constant size (i.e., "generally equal" or "generally equivalent size") within the field of view of all cameras of the system. In this way, video data of the object of interest is captured from a plurality of different spatial perspectives while maintaining the size of the object. Therefore, the video feeds from the various cameras may be selected (or rapidly rotated) from one slave camera to the next in a seamless fashion to the end user – it will appear as if the watcher is "floating" around the object of interest. The calculations of the focus and zoom, as well as merely controlling the pan and tilt of each camera (as in Yuen), provides a completely different functionality that is not found in the prior art.

Although Applicants believe that the claims as originally presented distinguish over Yuen and the other art cited by the Examiner, in an effort to bring the present prosecution to a successful conclusion, Applicants have amended each of the independent claims in order to more particularly point out the difference between the claimed invention and the cited references.

Specifically, Claim 1 has been rewritten to include the limitations of former Claim 3 (Claim 3 has been cancelled) and has been further modified to include specific language relating to the "sizing" of the object of interest and the rotation through multiple camera views of the object of interest. By using a focal

length calculation when controlling each of the plurality of slave cameras, the object of interest (at which the master and slave cameras are pointing) will appear to be of a generally equal size in each of the video feeds (images) from each of the cameras. The control system includes a controller which provides for rapid switching from one camera feed to the next (i.e., “successive additional camera images”) such that a watcher of the video feed will get the feeling of “flying” in a circle around the object of interest. The more slave cameras that are used (and the closer they are to each other), the more seamless the transition from one slave camera to the next becomes. Independent Claim 11 was similarly amended.

Without the claimed focal length calculation as well as the video feed controller in the control system, this functionality would not be available. Nothing in the cited art discloses or teaches this functionality. Yuen, for example, does not include a calculation for sizing the object of interest and does not include the video feed controller as part of a control system. This is not surprising because as a simple security system, Yuen is not concerned with the output video feed – a major concern in the present invention’s production of a television video feed for a sports broadcast (as an exemplary use).

Moreover, the other cited reference (U.S. Patent No. 5,598,208 to McClintock) merely teaches using multiple cameras to image an object of interest (in this case, a roller coaster). There is no master/slave relationship, no calculation of pan/tilt/focus/zoom, and none of the claimed control features of the present invention. In short, McClintock provides no relevant disclosure to the present invention, as claimed.

Dependent Claims and New Claims

Each of the dependent claims is allowable for at least the reasons set forth above. Further, new dependent Claims 14-16 have been added to point out additional features of the present invention. Claims 14 and 15 define whether the

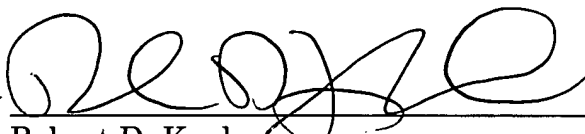
video images are sequential or captured at the same time during rotation of the image through the multiple slave cameras. For example, if a football running play is being shown from behind the ball carrier, and the image is rotated to show a view from the defensive side of the ball, Claim 14 is directed to showing this rotation with the player frozen in time, while Claim 15 is directed to showing this rotation while the video feed is in motion (time-wise) (see, page 9, line 13 – page 11, line 11).

Claim 16 further defines a time delay being put on the microphone feed to account for distance from the object of interest – for more life-like sound (see, page 11, lines 12-32). None of these features are taught or disclosed in the cited art.

The above amendments and accompanying remarks address each and every issue raised by the Examiner in the Office Action. Each amendment finds full support throughout the specification as noted above. Applicants believe that all claims of the present invention are now in condition for final allowance. If the Examiner feels that any issues remain outstanding, the Examiner is encouraged to contact Applicant's attorney at the contact information below.

Respectfully submitted,

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